AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 (Currently Amended). A weight scale comprising:

a load cell attachable to a support housing;

a spring coupled to the load cell to apply a force to the load cell, wherein a first end of the spring is fixed directly to the load cell;

a scale beam connected to the spring and at a proximal end connectable to the support housing, and

an overload protection bore comprising an aperture through which extends said beam and said aperture having at least one edge in a path of said beam, wherein said edge terminates said path and the beam reaches a maximum rated load position in the path before the edge.

2 (Original). A weight scale as in claim 1 wherein the proximal end of the beam is connected to the support housing vial a fulcrum pin and the beam pivots with respect to the housing.

3(Original). A weight scale as in claim 1 wherein the spring is connected to a distal end of the beam.

4(Original). A weight scale as in claim 1 wherein the bore aperture has edges on all sides of said beam, and said edges prevent excessive displacement of the beam.

5(Original). A weight scale as in claim 1 further comprising an adjustable attachment between the spring and at least one of the beam and load cell, wherein said adjustable attachment establishes an unloaded position of the beam.

6(Original). A weight scale as in claim 1 wherein said overload protection bore comprises an aperture through which extends said beam and said aperture having at least one edge in a path of said beam, wherein said edge terminates said path and the beam has maximum rated load position in the path before the edge.

7 (Withdrawn). A method for compensating for non-linear displacement of a beam in a weight scale having a load cell, the method comprising:

a. coupling a distal end of the beam to the load cell mounted such that a weight applied to the beam causes a force to be applied to the cell;

b. the force applied to the cell causes the strain gauge to generate a signal non-linearly related to the weight; and

c. processing the signal from the strain to compensate for the non-linearity of the signal by deriving a correction factor from a lookup table having a series of correction factors for various known weights, wherein the correction factors account for the non-linearity of the beam displacement.

8. (Withdrawn) A method as in claim 7 wherein the processing includes determination of a displayed weight (Wdisplayed) as follows:

Wdisplayed = (Cweight – Offset)* Gweight * Kw

where Cweight is derived from the signal from the strain gauge; Offset is a constant value determined upon calibration of the weight scale; Gweight is the gain of the weight scale determined at the time of calibration and Kw is an interpolated correction factor extrapolated from a lookup table based upon a calculated weight using a linear model Vs a correction factor.

9 (Withdrawn). A method as in claim 8 wherein calibration of a nonlinear weight scale is determined using a single calibration weight.

10 (New). A weight scale as in claim 1 wherein an end of the spring is fixed directly to the scale beam.

11 (New). A weight scale as in claim 1 wherein the spring is directly fixed to the load cell and fixed directly to the scale beam.

12 (New). A weight scale comprising:

a load cell attached to a support housing;

a spring attached to a second side of the load cell, wherein the second side is distal to the side attached to the support housing, wherein the spring applies a spring force to the load cell;

a scale beam connected to the spring and connected at a pivot point to the support housing, wherein spring expands and contracts as the scale beam pivots about the pivot point, and

an overload protection bore comprising an aperture through which extends said beam and said aperture having at least one edge in a path of said beam, wherein said edge terminates said path and the beam reaches a maximum rated load position in the path before the edge.